Environmental, Social, and Governance (ESG) Fund Investment Landscape in India: Unraveling Regulatory Dynamics, Investor Perspectives, and Global Appeal

Synopsis of the Research Proposal
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Abstract

The presented research proposal seeks to investigate the multifaceted dimensions of fund investments in India themed on Environmental, Social, and Governance (ESG) factors, focusing on the current landscape and regulatory dynamics, investor insights and perspectives, and the global appeal of India's emerging ESG fund investment market. The study encompasses three main objectives:

Objective 1: To analyze the current landscape of ESG funds in India and describe the recent regulatory developments impacting their operations. The objective aims to provide a comprehensive overview of the available ESG Fund investment avenues in India and describe the recent changes in the regulatory framework on ESG-themed fund investments.

Objective 2: To understand investor behavior towards ESG-themed funds in India, by evaluating their awareness levels, motivations, and impediments to investing in them. The objective will involve an in-depth study of investor perceptions and preferences, and help understand the factors influencing ESG fund investment decisions by individual investors in the Indian market.

Objective 3: To assess the attractiveness of the India ESG Index to global investors by comparing its performance with ESG indexes in the top five global economies. This objective aims to position the Indian ESG fund investment market within the global context, examining its performance and relative appeal to global investors.

The research will employ a mixed-methods approach, combining quantitative analysis of market data and financial performance metrics of ESG Fund investments with qualitative insights gathered through investor surveys and review of regulatory directives. The findings of this research will contribute to a deeper understanding of the ESG Fund investment landscape in India, offering valuable insights to industry practitioners and investors. The research outcomes are also anticipated to facilitate informed decision-making, foster sustainable investment practices, and contribute to the ongoing discourse on sustainable investing in India.

Introduction

Overview of ESG Investments

The world is undergoing transformative changes that are leaving a permanent impact on the financial industry. These changes are driven by the forces of Environmental, Social, and Governance (ESG) factors. This evolving landscape is characterized by profound changes in how businesses operate, investments are made, and risks are assessed.

The Environmental aspect of ESG is a key driver of change. The depletion of natural resources at a rate exceeding their ability to replenish has become an alarming concern globally. Issues such as climate change, emissions, pollution, water scarcity, and energy crisis are driving a rethink of investment decisions. Businesses are increasingly being evaluated not only on their financial performance but also on their environmental impact, with investors recognizing the importance of sustainability for the long-term success of businesses.

The Social front presents unique opportunities and challenges as well. Social considerations for businesses include themes such as dignity and respect, diversity and inclusion, health and safety of workers and clients, fair working conditions, and impact on local communities. Many new opportunities also arise, for example, healthcare and retirement solutions for an aging world population. Investors are increasingly tracking how companies manage their social responsibilities, and recognizing businesses that positively impact their communities and society.

The Governance aspect in ESG investing emphasizes the importance of ethical leadership, business transparency, risk management, and stakeholder engagement. Companies with strong governance practices are seen as better equipped to navigate the dynamic business landscape amid issues of cybersecurity, data privacy, regulatory non-compliance, bribery, and corruption. Sound governance practices are seen as indicative of a responsible organization, which will safeguard its own assets as well as those of its investors.

In essence, the financial industry is transforming to a state where ESG considerations are integral to decision-making. Investors are increasingly recognizing that embracing ESG principles is not just a moral imperative but a strategic necessity to prosper in a dynamic world. Consequently, the financial industry is evolving to adopt a more holistic approach that incorporates environmental, social, and governance factors in its operations and investments.

Trends in ESG Investing

ESG investing has experienced significant growth across the globe in recent years. According to the Global Sustainable Investment Review 2023, global ESG assets reached $43.8 trillion in 2022, up 55% from 2020. This growth is expected to continue in the coming years, as investors seek to align their portfolios with their values and also make a positive contribution to society and the environment. Sustainable investing is gathering momentum in India too, with the assets under management of ESG-themed mutual funds quadrupling from 2019 to 2023, as reported by Morningstar.

ESG factors are increasingly being integrated into traditional investment decisions, such as portfolio construction, investment analysis, and risk management. This is driven by the acknowledgment that ESG factors can have a material impact on company risk and return performance. Companies with strong ESG practices are often seen as being less vulnerable to environmental, social, and governance risks, which can lead to lower risks and higher long-term returns. In addition, climate change and sustainable investing have gained prominence, as reflected by a surge in investments in renewable energy and businesses with eco-friendly practices.

The regulatory landscape for ESG investing is also evolving, with governments around the world introducing new regulatory frameworks emphasizing ESG considerations and driving accountability and transparency. New frameworks around disclosures and reporting, such as the Task Force on Climate-related Financial Disclosures (TCFD) reporting or the International Financial Reporting Standards (IFRS) Sustainability Disclosure Standards, are helping to standardize ESG reporting and provide investors with more reliable information for their investment decisions. In India, the Securities and Exchange Board of India (SEBI) mandated the top 1000 exchange-listed companies (by market capitalization) to furnish the Business Responsibility and Sustainability Reporting (BRSR) for ESG disclosures on a mandatory basis from FY 2022-23. SEBI, through AMFI, has also mandated disclosures for ESG-themed Mutual Funds.

Despite the increased awareness and adoption of ESG investing, there are still some challenges that need to be addressed. These include the lack of standardization in ESG data disclosures by businesses, and the risks of ‘greenwashing’, where companies overstate their ESG performance to look better to investors. In addition, ESG criteria are inherently subjective, and hence

different investors may perceive and interpret these factors differently. Moreover, as ESG investing typically focuses on long-term sustainability and performance, there is a misalignment of the time horizon versus the traditional investment cycle, which is typically short-term. However, the growing demand for ESG investing is generating opportunities for innovation and the development of new frameworks, products, and strategies to mitigate these challenges.

ESG Funds

Increased investor awareness has led to the introduction of multiple ESG-focused investment products, such as ESG-themed mutual funds (MFs), exchange-traded funds (ETFs), Portfolio Management Services (PMSs), and Alternate Investment Funds (AIFs). These products make it easier for investors, especially those with limited investible capital, to create a diversified and ESG-focused portfolio without much of their own research.

ESG mutual funds invest in a basket of securities that meet a defined ESG criteria. While the criteria can vary depending on the fund, mutual fund management companies typically use positive screening to include companies with strong ESG practices and negative screening to exclude those engaged in controversial ESG activities. The exclusion criteria may include involvement in negative environmental impact activities such as pollution or deforestation, manufacturing of products such as tobacco or weapons, human rights abuses, or poor diversity and inclusion records.

ESG Exchange-traded funds (ETFs) are similar to ESG mutual funds, but they trade on an exchange like stocks. This makes them more liquid and transparent than typical mutual funds. These funds provide investors with exposure to companies that demonstrate strong ESG practices while maintaining the features of traditional ETFs.

Professional portfolio managers offer investors with Portfolio Management Services (PMS). PMS Funds provide personalized investment portfolios tailored to investors' specific needs, risk tolerance, and financial goals. PMS schemes are typically suitable for high-net-worth individuals and institutions seeking a personalized and actively managed approach to investment. ESG-themed PMS schemes take into account ESG considerations in their investment philosophy. Portfolio managers continuously assess the ESG performance of

existing holdings and have the flexibility to make necessary adjustments to the portfolio based on evolving ESG considerations.

Alternate Investment Funds (AIFs) pool funds from sophisticated private investors and institutional investors to invest in non-traditional asset classes, such as hedge funds, private equity, venture capital, or real estate. AIFs offer multiple benefits to investors, such as risk diversification, the potential for greater returns, lower correlation with traditional equity and bond markets, and access to niche sectors for investing. ESG AIFs are a relatively new type of ESG Fund investments and offer investors an opportunity to align their portfolios with their values and contribute to positive social and environmental change.

The increase in investor interest has resulted in the development of a variety of ESG-themed fund products, transforming the landscape of sustainable investing. This has also made ESG investing accessible to a wider range of investors, including those with limited investible capital. These products also cater to differing investment preferences and risk appetites, ranging from passively managed mutual funds and ETFs to actively managed PMS schemes and AIFs.

Conclusion

As ESG investing gains center stage, investors can expect to see more innovative products and strategies that help them create diversified portfolios that contribute to positive social and environmental change. This trend also necessitates a deep dive into the various facets of ESG Fund investments, which is intended to be covered as part of the proposed research.

Due to the relative recency of the products, research is required to provide a comprehensive understanding of the current landscape of ESG Fund investing in India, including the regulatory framework, investor preferences, and the available investment products. The research will also help understand investor behavior towards ESG Funds and assess the awareness levels, motivations, and barriers to investing in them. Finally, given that India is now among the top 5 economies of the world and a beacon for global investments in emerging economies, the study aims to assess the attractiveness of the India ESG Index to global investors through a comparison of the performance of ESG indexes in the top five global economies.

Literature Review

The rise of ESG (Environmental, Social, and Governance) investing is indicative of a paradigm shift in the financial industry, where investors are not only seeking financial returns but are also actively selecting investments that contribute to a positive global impact. As awareness grows regarding the importance of ESG factors in shaping the long-term profitability and sustainability of investments, there has been a significant surge in the popularity of ESG investing among investors [33]. Integrating ESG elements in investing is also one of the key trends in the asset management industry; according to Morningstar, the assets under management in global ESG funds reached $2.5 trillion by the end of 2022 [3]. On an overall basis, ESG elements are expected to be included by investors in nearly two-thirds of their portfolios within a decade [23].

ESG investing offers investors the opportunity to align their financial interests with their ethical values, supporting companies committed to sustainability and ethical business practices [7]. Adoption of ESG practices in operations is imperative for organizations as well. A study in 2015 [18] looks at over 2000 empirical studies, tracing back to the early 1970s. The results show that 90% of studies find a nonnegative relationship between ESG and corporate financial performance, with the majority reporting positive findings that appear stable over time. A study [27] found that the companies with more focus on ESG and thus having high ESG scores have outperformed their competitors in several ways, leading to the conclusion that ESG factors tend to positively correlate with a firm's financial performance.

From an investor perspective, a number of research studies have been conducted regarding the return and risk performance of ESG funds. However, the results of the studies correlating funds' financial returns to their ESG attributes have largely been inconclusive, with some indicating a positive impact while others indicating otherwise [17, 31]. A study [32] analyzed the performance of a US ESG Index compared to the broader US market for 15 years and found a positive impact of ESG investments on the Index's returns and risk reduction. On the other hand, a study [24] compared the ESG and conventional index of developed and emerging markets as a whole and found no significant difference in performance.

Specific to India, a number of studies have been conducted in recent times [5, 6, 14, 34, 37]. A recent study [36] found that ESG investments add to the investor's wealth in the long run. ESG indexes are also viewed as safer investments during crisis events and tend to perform better than the broader market. A study [39] on the other hand found no statistical difference in the returns of ESG and broad-based indices in India. A study [13] also found out that the performance of the ESG Index was not significantly different from the conventional index during US Debt Ceiling Crisis, BREXIT, China Black Monday, Demonetization, and COVID-19 crisis. Conversely, there have been studies in other parts of the world that have found that ESG investing indeed offers better downside protection during market crisis events [2, 8, 16, 28]. The nature of the differences between these studies and the results themselves warrant a deeper look into the topic in further research.

Another interesting development is the variety of new investment avenues that have been made available to investors looking to put money into ESG causes. Within the realm of equity investments, choices range from passive exchange-traded funds and fund-of-funds to active mutual funds for retail investors, and portfolio management services and alternate investment options for high net worth, risk-taking individual or institutional investors. As per a 2019 Global Family Office Report by UBS [9] on 360 family offices globally, 34% of the respondents were actively participating in sustainable investing and 85% of these sustainable investments met or exceeded expectations. A study [22] found that alternative investment managers are increasingly adopting ESG practices in their decision-making and investment approaches. The study of ESG-themed equity investment options in India is an area that needs further research.

The pervasiveness of ESG investing is more pronounced in the younger population [1]. As per a report from Credit Suisse and the Young Investors Organization [11], 62% of Generation Y and Z express interest in sustainable and impact investment products. The Deloitte Global Millennial Survey 2023 [12], covering over 22,000 Millennials and Generation Z from 44 countries, revealed climate change to be a significant concern for this demographic. In an experimental context, a study [21] discovered that investors may willingly pay a premium of 4.567% for sustainable investment with impact.

Studies show that the level of awareness of investors also influences their investment decisions, and investors may perceive qualities of a mutual fund largely by just how ESG factors are incorporated into the fund's portfolio [10]. Investors may be vulnerable to greenwashing in mutual funds, where they might pay a premium solely due to the ESG label irrespective of the portfolio build [26]. A variety of drivers, other than the sustainability agenda, are believed to drive investor preferences towards ESG instruments, including hedging motives [4, 40], and limited private capital funding of social impact initiatives [19]. Specific to India, the ethical, environmental, and financial considerations that attract investors to ESG-themed products need to be explored further. This would help delineate the factors shaping ESG discourse in India.

The global landscape of ESG investments is increasingly governed by a collage of regulatory frameworks, reflecting the diverse approaches taken by different countries and regions to address sustainability concerns. According to a study [15], there is a clear lack of standardization between the ESG investors' requirements and the disclosures made by firms. As a result, the investment industry is increasingly adopting the TCFD (Task Force on Climate-related Financial Disclosures) recommendations and the SASB (Sustainability Accounting Standards Board) framework in investment decision-making. Notably, European financial institutions are leading the efforts in mandating firms to clearly articulate their climate risk, establish targets to mitigate the same, measure performance, demonstrate improvement, and align these aspects with their overall business strategy and operations. A study [38] classifies countries across the world as countries with well-developed, rapidly improving, developing, or early-stage ESG frameworks depending on where they are in their ESG disclosures and reporting journey, with India categorized as a country with ESG framework at a developing stage.

A study [35] highlights the initiatives taken by the Securities and Exchange Board of India (SEBI) in recent years to encourage firms to adopt sustainable business practices helping investors and society at large. These measures include the mandatory disclosure of ESG performance by listed companies, the introduction of sustainability reporting guidelines, and the promotion of responsible investment practices among institutional investors. The study also enumerates the challenges faced by SEBI in advancing ESG practices, such as limited

awareness of ESG issues and best practices among companies as well as investors, a still-developing regulatory framework, and pushback from companies among others. A study [25] also notes that while policies around sustainability do exist in corporates, the limited prevalence of sustainability committees implies that boards and management may not provide adequate attention to ESG risks. Hence while SEBI has laid the foundation for a more sustainable investment landscape, more work on the regulatory framework needs to be done. SEBI has recently introduced guidelines on ESG funds classification and reporting, which need further study and research to assess their impact.

Market Indexes play a crucial role in investment benchmarking and analysis in developed as well as emerging economies. One study [28] suggests that adding ESG indices to an investment portfolio provides diversification benefits and reduces overall portfolio risk. From a risk-return perspective, a study on the performance comparison of ESG and conventional indices of developed and emerging markets at a consolidated level was conducted [24], which could not find any significant difference in performance between them. Another study [20] assessed ESG investment performance in diverse regions, including both developed markets - USA, Germany, and Japan, along with emerging markets - India, Brazil, and China. The study indicated that in most countries, the ESG Index outperformed the broader market index, and provided better risk-adjusted returns, and more downside risk protection. Moreover, there was insufficient evidence to conclude that the performance of ESG indices varied significantly between developed and emerging economies.

In India, multiple ESG-related indices exist, including BSE Greenex, BSE Carbonex, and the NIFTY100 ESG Index. A study [30] suggests that sustainable indices perform comparably with other benchmarks, hence investors should shift their focus to sustainable investing which will further encourage companies to adopt more sustainable business practices. India is an emerging investment destination for investors globally, hence there is a need to understand the risk and return dynamics between sustainable indices in India and the other major economies in the world.

Present Study

Research Gap

- From an investor perspective, a number of research studies have been conducted to find the impact of ESG attributes on the return and risk performance of ESG funds. However, the results of these studies have largely been inconclusive. The nature of the differences between these studies and the results themselves warrant further research.

- The studies of ESG-themed equity investment options in India so far have not covered areas such as Portfolio Management Schemes in detail, which are the investment of choice for many investors.

- Specific to India, the ethical, environmental, and financial considerations that attract investors to ESG-themed products need to be explored further. This would help delineate the factors shaping ESG discourse in India.

- SEBI has recently introduced regulatory guidelines on ESG funds classification and reporting, which is a new development and needs further study.

- India is a fast-emerging investment destination for investors globally, hence there is a need to understand the risk and return dynamics between sustainable indices in India and the other major economies in the world.

Problem Statement

The rise of ESG factors-based investing has translated into increased demand for innovative products and strategies that enable investors to construct diversified portfolios that align with their ethical values and contribute to positive social and environmental change. ESG Funds are one such product category, which has gained traction in recent years due to their appeal to retail investors and institutional investors alike. This burgeoning trend necessitates rigorous research of the various aspects of ESG Fund investments in India. The currently available literature on this topic is sparse with research articles present either at a global level and large countries, or in fragmented publications made by financial intermediaries and news agencies in India.

Rationale of the Study

Multiple trends and factors necessitate a study of the ESG Funds in India due to their impact on the investment landscape.

- Growing Investor Interest: There is a noticeable surge in investor interest in sustainable investment options, reflecting a broader societal shift toward ethical and environmentally conscious practices. Global ESG assets reached $43.8 trillion in 2022, and are expected to keep growing in the coming years. In India, ESG AUM has quadrupled in just four years. This trend necessitates a deeper understanding of the growth in the Indian context.

- Increasing investor base: The proliferation of the internet, coupled with the digitization fueled by the pandemic, has had a tremendous impact on the investor base in India. India, now the most populous country in the world and with a growing young population, is seeing millions of new investors entering the markets and looking for sustainable investment avenues.

- Shift in Asset Allocation: The recent times have also seen a shift in product preferences, with investors increasingly moving away from traditional asset classes like gold, real estate, and fixed deposits, to new-age assets like mutual funds and cryptocurrencies. Millennials are not shying away from taking chances at high-risk investment options, such as investing in the equities market.

- Evolving product landscape: ESG Funds are a relatively new product offering in India, with more than 80% of schemes being introduced in the markets in the last 5 years. ESG integration in schemes such as Alternate Investment Funds is still very nascent. The quantum of ESG Fund offerings in India is also very low as compared to the offerings in the larger developed economies. The introduction and evolution of these products necessitate a deeper analysis of their features and performance metrics for informed investor decision-making and industry growth.

- Evolving Regulatory Framework: The Regulatory bodies governing mutual fund investments in India, including the Securities and Exchange Board of India (SEBI) and the Association of Mutual Funds in India (AMFI), are increasingly rolling out new mandates and guidelines emphasizing ESG considerations. The increasing regulatory attention towards this industry warrants additional focus and attention.

- ESG Integration and Disclosures: Indian companies are gradually recognizing the significance of ESG integration and disclosures in their operations. Regulatory frameworks, such as the Business Responsibility and Sustainability Reporting (BRSR) introduced by SEBI, are providing the necessary impetus for this. Investors, in turn, are keen to assess the ESG performance of companies in which mutual funds invest, making the assessment of ESG integration in funds a relevant area of study.

- Limited investor awareness and understanding: Many investors lack basic knowledge about ESG concepts and their application in mutual funds. Studying the awareness levels, motivations, and impediments of investors to investing in ESG Funds can help design appropriate awareness campaigns and also introduce relevant products suited to the preferences of Indian investors.

- Impact on Financial Performance: Studies from across the globe suggest that companies with high ESG scores may exhibit superior financial performance over the long term. While there is no guarantee of superior returns, investment in ESG funds has the potential to outperform the performance of non-ESG funds. Assessing the performance metrics of ESG mutual funds is critical for investors seeking both financial returns and sustainability goals.

- Innovations in ESG Products: The financial industry is witnessing innovations in ESG product offerings; within the realm of ESG funds, fund managers are rolling out new products with subtle nuances and themes such as climate change, water conservation, or renewable energy. A study into these innovations will provide insights into evolving market offerings as well as investor preferences.

- Comparison with global ESG benchmarks: With India being a premier emerging market investment destination of choice across the world, analyzing the performance of India's ESG fund market against those of other developed global economies can reveal areas of improvement and identify potential competitive advantages for attracting foreign investment capital into the country.

- Concerns around Greenwashing: With the rise of interest in ESG investments, there is a growing concern about "greenwashing", where companies falsely depict themselves as being environmentally conscious. A deeper analysis of ESG mutual funds helps evaluate how well fund managers navigate this risk and truly focus on companies with genuine social and environmental impact.

- Climate Change: ESG investing closely aligns with global climate goals, for example, those committed in the Paris Agreement. Investments in companies contributing to these goals are seen as supporting efforts to combat climate change. A study of this factor would help understand how ESG funds incorporate these considerations into their investment mandate.

Research Objectives

The proposed study aims to provide a detailed understanding of ESG Fund investments in India, fostering informed decision-making among investors and contributing to the product's expansion in the Indian market. The specific research objectives are:

- To analyze the current landscape of ESG Funds in India and recent regulatory developments impacting it.

- To understand the behavior of retail investors in India towards ESG Funds, and assess the awareness levels, motivations, and barriers to investing in them.

- To assess the attractiveness of the India ESG Index to global investors through a comparison of the performance of ESG indexes in the top five global economies.

Research Questions and Null Hypothesis

The above research objectives can be further delineated into the below specific research questions to be addressed as part of the study.

1. What are the various ESG-themed equity investment products available in India and how do they compare against each other on product and performance parameters?
    - Ho (Draft): There are no significant differences in the product and performance parameters of ESG-themed equity investment products available in India.

2. What are the recent regulatory developments in India that impact the ESG-themed equity fund investment market?
    - H_o (Draft): There are no recent regulatory developments in India that impact the ESG-themed equity fund investment market.

3. What is the level of awareness of ESG-themed equity fund products among Indian retail investors?
    - H_o (Draft): Indian retail investors have a high level of awareness of ESG-themed equity fund products.

4. What are the motivators and impediments that Indian retail investors face when investing in ESG-themed equity fund products?
    - H_o (Draft): There are no significant differences in the motivators and impediments faced by Indian retail investors when investing in ESG-themed equity fund products compared to traditional investment options.

5. How does the performance of the India ESG Equity Index compare to ESG indexes in the top five global economies?
    - H_o (Draft): There are no significant differences in the performance of the India ESG Equity Index as compared to the ESG indexes in the top five global economies in terms of risk-adjusted returns.

Research Methodology

Research Design

The research methodology will adopt a mixed-methods approach, utilizing both quantitative and qualitative analysis to provide a comprehensive understanding of the ESG (Environmental, Social, and Governance) Fund investment landscape in India.

The quantitative aspect of the study will involve a detailed analysis of market data and financial performance metrics related to ESG Funds. The products under study include ESG mutual funds and Exchange Traded Funds in India, a sample of the available Portfolio Management Schemes and Alternate Investment Funds, the benchmark ESG Index used in India, and also the major prevalent ESG Indexes in the top five global economies. This study will incorporate various variables of the Funds, including Net Asset Value (NAV), Assets Under Management (AUM), Total Expense Ratio (TER), period of existence, and portfolio constituent companies. The analysis will involve an examination of risk-adjusted returns, volatility, and correlation with the benchmark Index through a variety of statistical tools including Mean, Standard Deviation, Coefficient of Correlation, Coefficient of Determination, Jensen's Alpha, portfolio Beta, Sharpe Ratio, and Treynor Ratio.

Parallelly, the qualitative component of the research will be enabled through an exploratory investor survey aimed at capturing their perspectives, motivations, and barriers influencing investment decisions in ESG Funds. The survey will be designed to gather valuable insights into investor awareness, preferences, and behavior towards ESG Fund investments. Additionally, a descriptive study will be undertaken on the examination of recent developments in regulatory policies and frameworks governing the ESG investment landscape in India.

By integrating quantitative analysis of the risk-return performance of ESG Funds with qualitative insights derived from investor surveys and regulatory framework reviews, this mixed-methods approach aims to offer a comprehensive understanding of the Environmental, Social, and Governance (ESG) Fund investments in India. The holistic research design is aimed at highlighting the multifaceted dimensions of investing in India's ESG Funds market for Indian as well as global investors.

Sample / Participants

The variables in the study, and their correlating sampling strategy, are dependent on the nature of the research question and underlying hypothesis.

- For the research question, "What are the various ESG-themed equity investment products available in India and how do they compare against each other on product and performance parameters?", the variables will include types of ESG-themed equity investment products and the various offerings under each of these product types in the market. The products include ESG-themed mutual funds, Exchange Traded Funds (ETFs), Portfolio Management Services (PMS) schemes, and Alternate Investment Funds (AIFs). For the purposes of this study, we will include a 100% population for the ESG-themed mutual funds and Exchange Traded Funds (ETFs) in India as of January 2024. Portfolio Management Services schemes are more private in nature, with limited available disclosures on funds' performance metrics, hence the sample will be limited to 3 schemes based on convenience sampling. Alternate Investment Funds (AIFs) are exclusive offerings typically to high-risk high net worth investors, and they invest in multiple asset classes other than listed equity securities such as real estate, private equity, or venture capital. Given the difference in their portfolio composition against the afore-mentioned product types which incorporate mainly listed equity securities, a comparison of their risk-return performance is not suitable, hence AIFs will be excluded from the study.

- The research question, "What are the recent regulatory developments that impact the ESG-themed equity fund investment market in India?", will be addressed through qualitative, descriptive research. The variables to be considered include the Indian regulatory bodies that govern ESG-themed equity fund investments in India and the recently introduced laws, rules and regulations, and amendments to existing regulations that impact the operations of such investments. Regulatory changes announced in the years 2022 and 2023 by the Securities and Exchange Board of India (SEBI) and the Association of Mutual Funds in India (AMFI) will be considered for the study. International standards, guidelines, and recommendations from organizations such as the Task Force on Climate-related Financial Disclosures (TCFD) will not be a part of the study due to their limited legal enforceability to India-domiciled funds.

- The research questions, “What is the level of awareness of ESG-themed equity products among Indian retail investors?” and “What are the motivators and impediments that Indian retail investors face when investing in ESG-themed equity products?” will be addressed through investor surveys. The population for the study will include all Indian adults who are retail existing or potential investors in the Indian fund investment market. Since such a population is in millions, the sampling size for the study is determined using the following formula:

  $$\text{Sample size } (n) = Z^2 * p * (1 - p) / E^2$$

  where,

  Z = confidence level

  p = estimated proportion of investors who are interested in ESG investing

  E = margin of error

  Assuming a confidence of 95% (Z = 1.96 and E = 0.05) and that 50% of the overall population will be interested in ESG fund investing (p = 0.5), the sample size (n) comes to 385. We will target to have a sample size between 250-400. Convenience sampling will be used to collect the required sample data.

- For the research question, “How does the performance of the India ESG Equity Index compare to ESG indexes in the top five global economies?”, the variables will include the values of the ESG Indexes in India and the top 5 global economies of the world, viz. the United States, China, Japan, Germany, and the United Kingdom. These countries represent a diverse set of economic structures and conditions. The first step will be to use purposive sampling to identify the ESG equity indexes for each of the selected economies. This would provide us with the relevant ESG indexes that are broadly recognized and tracked by major financial institutions. For India, this is the Nifty100 ESG Total Returns Index. The next step will be to define a specific time frame for the analysis, which we will consider as from the inception date of the India Nifty100 ESG Total Returns Index (March 27, 2018) to the end of 2023 (December 31, 2023). The analysis of more than five years of data will reveal both short-term and long-term performance trends.

Data Collection

The data for the study will be collected from a variety of primary and secondary data sources, depending on the nature of the research question.

- For the research question, "What are the various ESG-themed equity investment products available in India and how do they compare against each other on product and performance parameters?", the data for the ESG-themed mutual funds, Exchange Traded Funds (ETFs), Portfolio Management Services (PMS) schemes, and Alternate Investment Funds (AIFs), will be collated from reputable sources such as National Stock Exchange (NSE) website, Association of Mutual Funds in India (AMFI) portal, Bloomberg, and the portals of the respective fund houses managing the schemes. The data will include variables such as Net Asset Value (NAV), Assets Under Management (AUM), Total Expense Ratio (TER), date of launch, and portfolio constituents.

- For the research question, "What are the recent regulatory developments that impact the ESG-themed equity fund investment market in India?", the details pertaining to the regulatory framework changes will be collected from the portals of Securities and Exchange Board of India (SEBI) and Association of Mutual Funds in India (AMFI).

- The research questions, "What is the level of awareness of ESG-themed equity products among Indian retail investors?" and "What are the motivators and impediments that Indian retail investors face when investing in ESG-themed equity products?" will be addressed through investor surveys. A questionnaire would be used to collect data from the sampled investors. The questionnaire would cover topics such as investor demographics, investment experience, knowledge of ESG investment funds, and motivations and impediments to ESG fund investing.

- For the research question, "How does the performance of the India ESG Equity Index compare to ESG indexes in the top five global economies?", the performance data of various Indexes for the study will be collected from reputable sources such as Bloomberg, NSE portal, MSCI, and FTSE Russell. The data would include the performance history of the Total Return or Net Total Return variant of each index.

Limitations of the Study

- Given that limited portfolio constituent data is available for Portfolio Management Schemes, the sample size for inclusion may be limited.
- Alternate Investment Funds focus on many asset classes other than equities, such as real estate, hence will be excluded from the scope of the study.
- It is proposed to adopt non-probability judgment sampling given that there is no formal sampling frame for Mutual Fund investors in India. There is a possibility of research bias, given that random sampling is not used.
- Regulatory changes announced by regulators other than SEBI and AMFI would not be part of the study. It is possible that the industry may be directly or indirectly impacted by regulations of other regulatory bodies such as RBI.
- Similarly, international standards, guidelines, and recommendations from organizations such as the Task Force on Climate-related Financial Disclosures (TCFD) will not be a part of the study due to their limited legal enforceability to India-domiciled funds.

Data Analysis and Interpretation

The data analysis for the research will adopt a mixed methods approach, encompassing both quantitative and qualitative methods.

- For the research question, "What are the various ESG-themed equity investment products available in India and how do they compare against each other on product and performance parameters?", the analysis of fund-specific data will involve an examination of risk-adjusted returns, volatility, and correlation with the benchmark Index through a variety of statistical tools including Mean, Standard Deviation, Coefficient of Correlation, Jensen's Alpha, Sharpe Ratio, and Treynor Ratio.

- The research question, "What are the recent regulatory developments that impact the ESG-themed equity fund investment market in India?", will involve descriptive content analysis of the regulatory publications, circulars, and guidance notes to identify the key changes to the regulatory framework changes related to the ESG Fund investment market in India. Market research and analyst insights as available through secondary data sources may be utilized to support the views around the impact of the recent regulatory developments.

- The research questions, "What is the level of awareness of ESG-themed equity products among Indian retail investors?" and "What are the motivators and impediments that Indian retail investors face when investing in ESG-themed equity products?" will be addressed through investor surveys. The results of the survey will be cleaned, coded, and summarized using descriptive statistics, such as frequency distributions and percentages. Cross-tabulations between different variables will be prepared to identify patterns and associations between different groups of respondents. Visualization tools, such as bar charts and scatter plots, will be used to represent the data in a clear and concise manner.

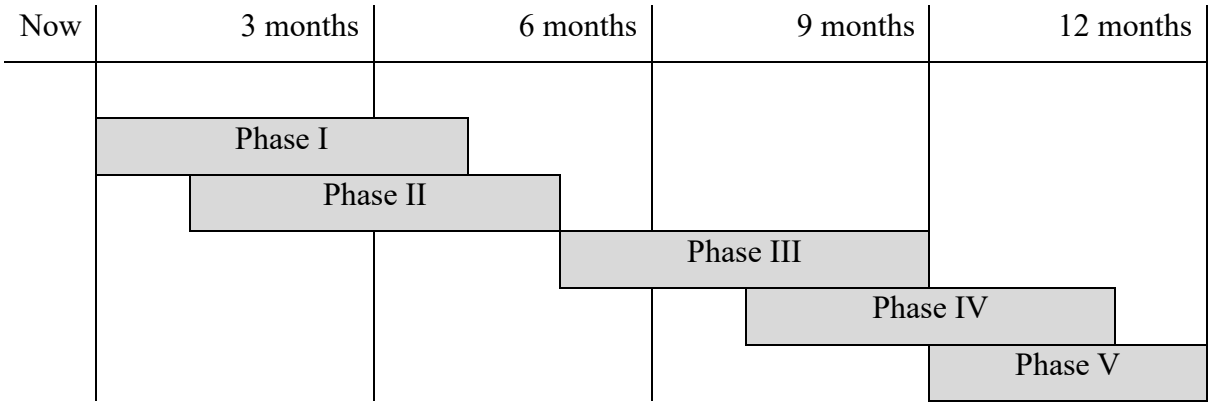
- For the research question, "How does the performance of the India ESG Equity Index compare to ESG indexes in the top five global economies?", the historical performance data for the identified ESG equity indexes will be summarized using descriptive

statistical tools including mean return and standard deviation. In addition, comparative analysis will be used to assess the relative and risk-adjusted performance of the India ESG Index against other indices through tools including t-tests and Sharpe Ratio. Also, correlational analysis will be performed using Karl Pearson's Coefficient of Correlation to evaluate the correlation between the India ESG Index and each of the other five ESG indexes.

The consolidated findings of the research will contribute to a deeper understanding of the ESG Fund investment landscape in India and offer significant insights to investors and other market participants in this field.

Work Plan of the Research

The work plan (activity schedule) and the time by which these are to be achieved are indicated below in the form of a Gantt Chart.



The various phases of the research activity are described below:

Phase I: Extensive literature review, and Research Paper #1

Phase II: Preparation of the Research Design, including the survey questionnaire and the mathematical models for quantitative research, and Research Paper #2

Phase III: Pilot Study, Data Collection, and Research Paper #3

Phase IV: Data Validation and Analysis

Phase V: Interpretation, Conclusion, Recommendations, and Submission of Thesis

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